



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

BELT ET AL

NL000297

Serial No. 09/855,626

Group Art Unit 2644

Filed: May 15, 2001

Examiner Laura A. Grier

Title: METHOD AND DEVICE FOR ACOUSTIC ECHO CANCELLATION COMBINED  
WITH ADAPTIVE BEAM FORMING

Commissioner for Patents  
BOX APPEAL BRIEF - PATENTS  
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING OR TRANSMISSION

I certify that this correspondence is being:

[X] deposited with the U.S. Postal Service with sufficient postage as first-class mail in  
an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria,  
VA 22313-1450.

[ ] pages transmitted by facsimile to the U.S. Patent  
and Trademark Office at 703-872-9306

On: July 23, 2004

By: Elissa DeLucy

RECEIVED

JUL 29 2004

Technology Center 2800

Sir:

Enclosed is an original plus two copies of an Appeal  
Brief in the above-identified patent application.

Please charge the fee of \$330.00 to Deposit Account  
No. 14-1270.

Respectfully submitted,

By 

Russell Gross, Reg. 40,007  
Attorney  
(914) 333-9631

Best Available Copy



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Atty. Docket:

BELT ET AL

NL000297

Serial No.: 09/855,626

Group Art Unit: 2644

Filed: May 15, 2001

Examiner: Laura A. Grier

Title: **METHOD AND DEVICE FOR ACOUSTIC ECHO CANCELLATION COMBINED  
WITH ADAPTIVE BEAM FORMING**

RECEIVED

Honorable Commissioner of Patents and Trademarks  
Arlington, VA 22313

JUL 29 2004

Technology Center 2600

CERTIFICATE OF MAILING OR TRANSMISSION

I certify that this correspondence is being:

☒ deposited with the U.S. Postal Service with sufficient postage as first-class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

☐ transmitted by facsimile to the U.S. Patent and Trademark Office at 703-872-9306

On:

July 23, 2004

By:

Elissa De Lucey

APPEAL BRIEF

Sir:

The rejection of claims 1-8 and 10 is hereby being appealed,

which are reproduced in the attached Appendix.

07/27/2004 EFLORES 00000059 141270 09055626

01 FC:1402 330.00 DA

1. Real Party in Interest

The real party in interest is Koninklijke Philips Electronics  
N. V., the assignee herein.

## **2. Related Appeals and Interferences**

The Appellant is not aware of any appeals or interferences that relate to the present application.

## **3. Status of all Claims**

Claims 1-10 are currently pending in the present application. Claims 1-10 were submitted in the present application when originally filed. In the Office Action dated April 7, 2004, Claims 1-8 and 10 were finally rejected and thus are currently being appealed.

## **4. Status of Amendment**

No Amendments were filed subsequent to the Final rejection of April 7, 2004.

## **5. Summary of the Invention**

The present invention is directed to a method where multiple input signals are subjected to a combination process of adaptive beamforming and adaptive echo canceling, as described on page 4 of the present application and shown in Figure 1. As described on pages 5-6, for each of the input signals an individual processing history of adaptive echo cancelling data is kept and combined with current adaptive beamforming data.

The present invention is also directed to an audio processing device comprising parallel acoustic paths for providing respective input signals, the acoustic paths are connected in series to beamformer paths. As can be seen from Figure 1, the device includes an adaptive beamformer and an adaptive echo canceller, as described on page 4. As described on pages 5-6, the adaptive echo canceller is provided with storage means for storing in relation to every input signal, individual processing histories of adaptive echo cancelling data for combination with current adaptive beamforming data.

#### **6. Issues Presented for Review**

The Appellant respectfully requests that the Board of Appeals review the final rejection of Claims 1-8 and 10 under 35 USC 102 as being anticipated by Rasmusson et al.

#### **7. Grouping of the Claims**

The Appellant respectfully submits that Claims 1-8 and 10 either stand or fall together.

#### **8. Arguments**

Claims 1-8 and 10 stand rejected under 35 USC 102 as being anticipated by Rasmusson et al. (U.S. Patent No. 6,549,627).

In order to make a proper anticipation rejection under 35 U.S.C. 102, Section 706.02 of The MPEP requires that a reference

must teach every aspect of the claimed invention either explicitly or impliedly. Further, in order to establish anticipation, it is incumbent upon the Examiner to identify in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Mascinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, (Fed. Cir. 1984).

In view of the above, it is respectfully submitted that the burden of showing that Rasmusson et al. anticipates all of the features recited in the claims has not been met. In particular, Rasmusson et al. neither explicitly nor impliedly teaches "for each of the input signals an individual processing history of adaptive echo cancelling data is kept and combined with current adaptive beamforming data", as recited in Claim 1. A similar feature is also recited in Claims 4 and 10.

In initially addressing this feature in the above rejection, the calibration process disclosed in Rasmusson et al. is being relied on. However, in column 3, line 20-27, Rasmusson et al. discloses:

"A target source is activated, thereby generating an acoustic signal that is received by the microphones. The trained adaptive filters are then operated to generate jammer signals. Pseudo noise signals may be supplied to the inputs of the adaptive filters for this purpose. Respective ones of the jammer signals are then combined with corresponding signals supplied from the microphones, thereby generating combination signals."


Based on the above disclosure, it is evident that the jammer signals of Rasmusson et al. are not "individual processing history of adaptive echo canceling data", as required by the claims. It is further evident that the jammer signals of Rasmusson et al. are also not combined with "current adaptive beamforming data", as further required by the claims. However, despite these points, the above rejection was maintained.

In maintaining this rejection, the FIR adaptive filters of Rasmusson et al. were again being relied on. However, in column 5, lines 33-35, Rasmusson et al. clearly states that the FIR filters 413,415 generate jammer signals. In view of this, Rasmusson et al. cannot be reasonably interpreted as disclosing "for each of the input signals an individual processing history of adaptive echo cancelling data is kept and combined with current adaptive beamforming data", as required by the claims. Therefore, it is respectfully submitted that this feature is not anticipated by Rasmusson et al.

In view of the above-described distinctions, the Appellant respectfully submits that the invention of Claims 1-8 and 10 is not anticipated by Rasmusson et al. Therefore, the Appellant respectfully requests that the final rejections of these claims be reconsidered and reversed.

Please charge the fee of \$330.00 to Deposit Account  
No. 14-1270.

Respectfully submitted,

By   
Russell Gross, Reg. 40,007  
Attorney  
(914) 333-9631